

# ***CAPS in Colorado***

## **Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

## **USDA-APHIS-PPQ**

- Pat McPherren, SPHD
- Tim Miller

## **Colorado State University**

- ***Entomology***

- Jason Bishop
- David James
- Matt Siderhurst
- Bob Hammon
- Rick Zimmerman
- Dave Leatherman
- Lou Bjostad

- ***Plant Pathology & Weeds***

- Howard Schwarz
- Tamla Blunt

# Matthew Siderhurst



## David James

## Jason Bishop



# ***Exotic Wood Boring Insects***

**airports and distribution centers**

- *solid wood packing material*

**long-horned wood boring beetles**

- *Anoplophora glabripennis*
- *Anoplophora chinensis*
- *Anoplophora malasiaca*

**difficult to survey**

- *visual survey only*

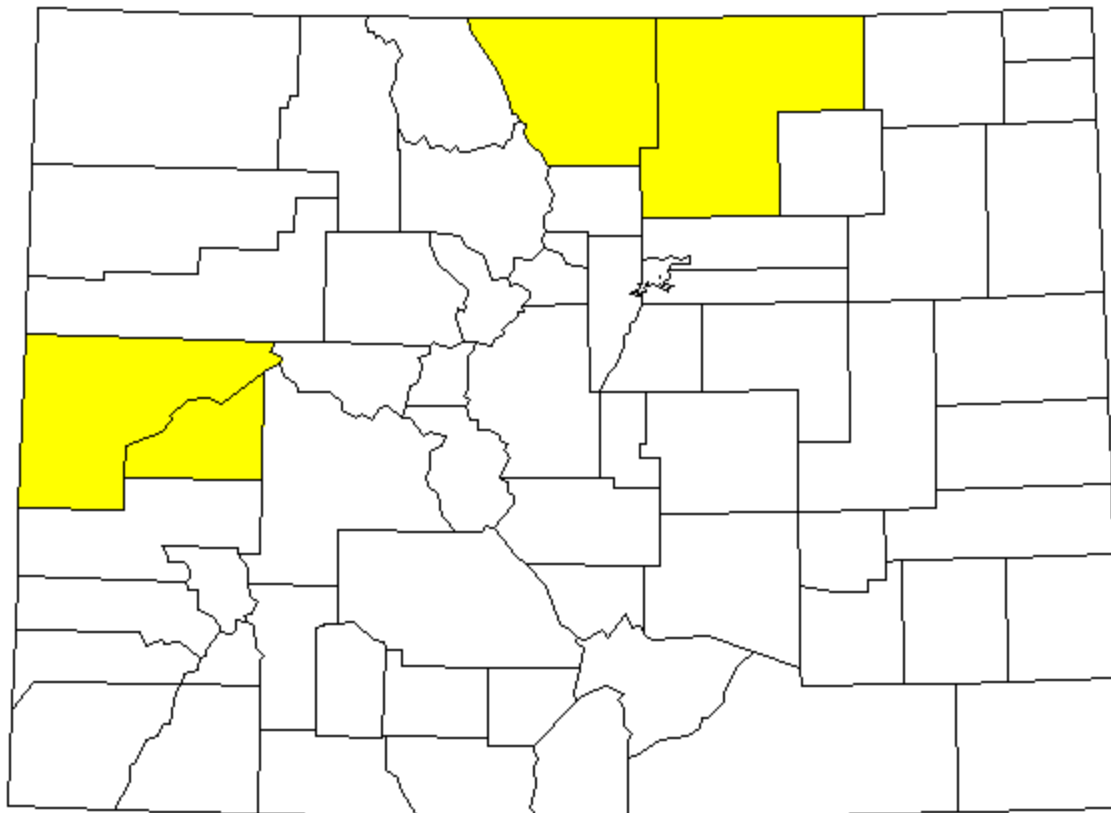


*Reported Status of*

**ASIAN CERAMBYCID (LH) BEETLE , ANOPLOPHORA GLABRIPENNIS (LONGHORNED)**

**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out



**Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

**Colorado State University**

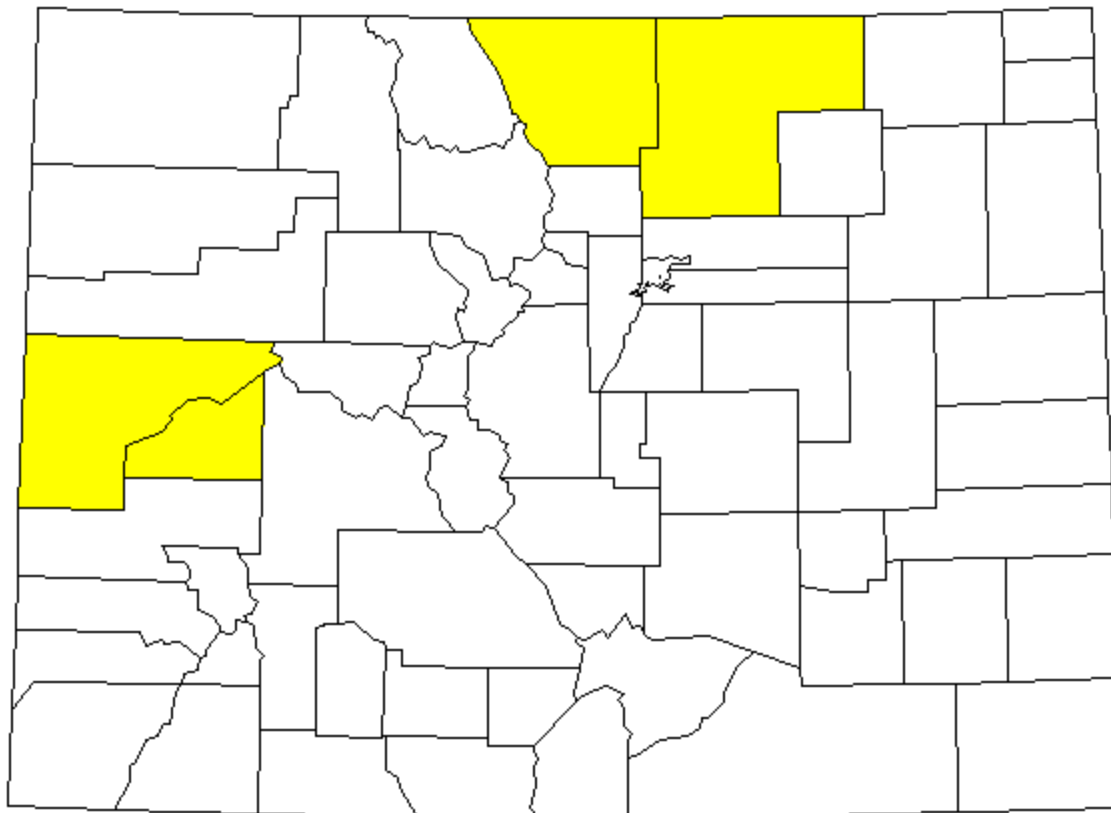
- Dave Leatherman
- Jason Bishop
- Lou Bjostad

The Center  
Negative da



*Reported Status of*  
**CITRUS LONGHORNED BEETLE , ANOPLOPHORA CHINENSIS**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

-  Established
-  Not established
-  Being eradicated
-  Eradicated
-  Not found
-  Died out



**Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

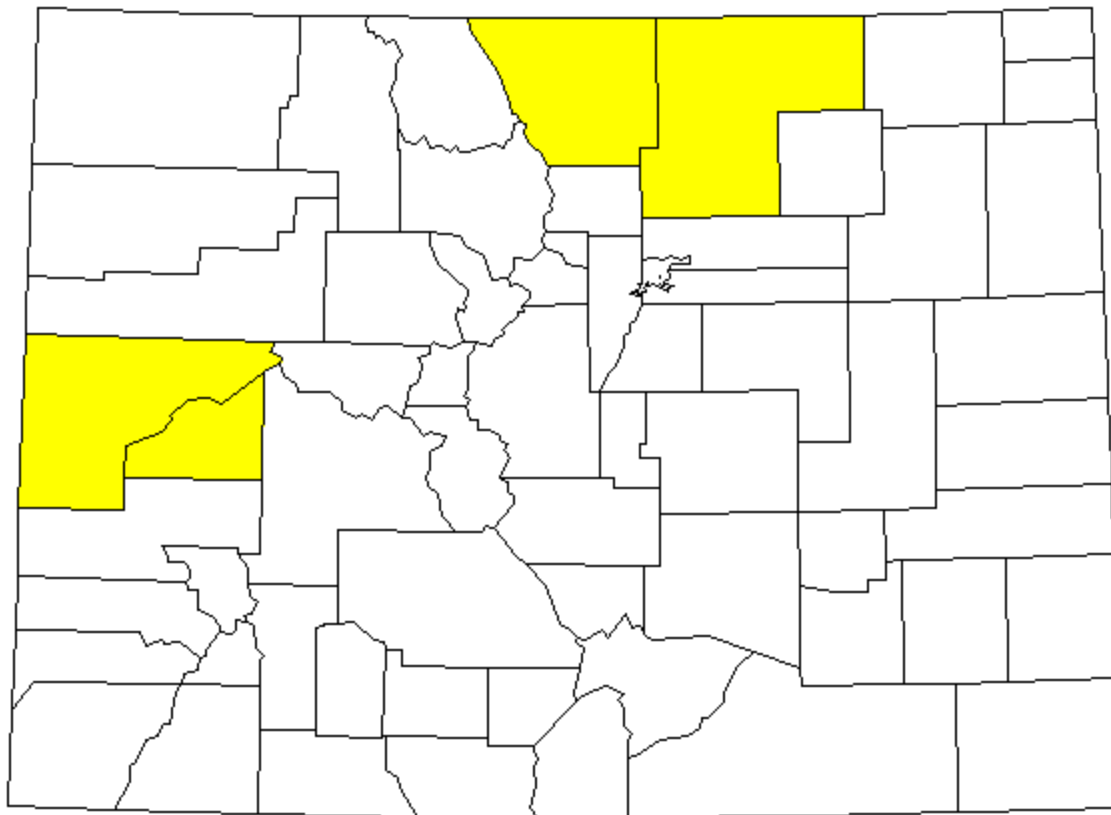
**Colorado State University**

- Dave Leatherman
- Jason Bishop
- Lou Bjostad

The Center  
Negative

*Reported Status of*  
**LONGHORNED BEETLE; A , ANOPLOPHORA MALASIACA**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

-  Established
-  Not established
-  Being eradicated
-  Eradicated
-  Not found
-  Died out



**Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

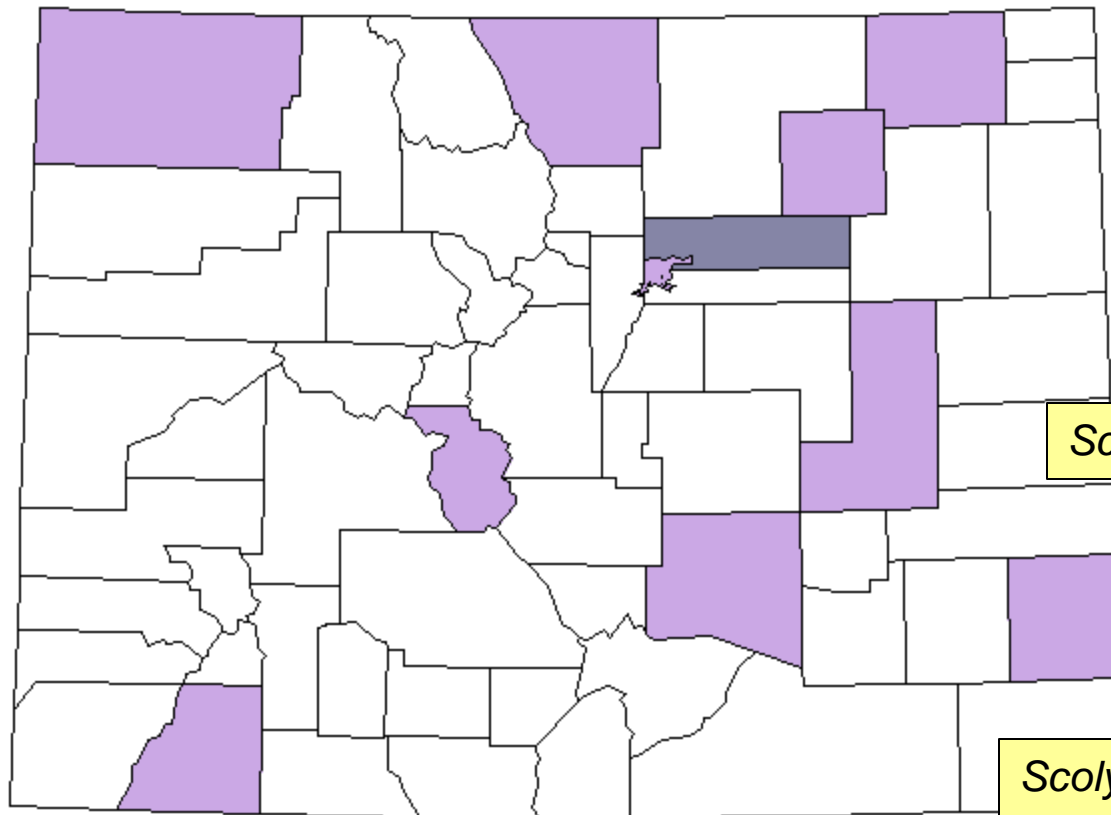
**Colorado State University**

- Dave Leatherman
- Jason Bishop
- Lou Bjostad

The Center  
Negative

*Reported Status of*  
**BARK BEETLE; A , SCOLYTUS SCHEVYREWI**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

-  Established
-  Not established
-  Being eradicated
-  Eradicated
-  Not found
-  Died out

**James  
LaBonte**



*Scolytus schevyrewi*



*Scolytus multistriatus*

**Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

**Colorado State University**

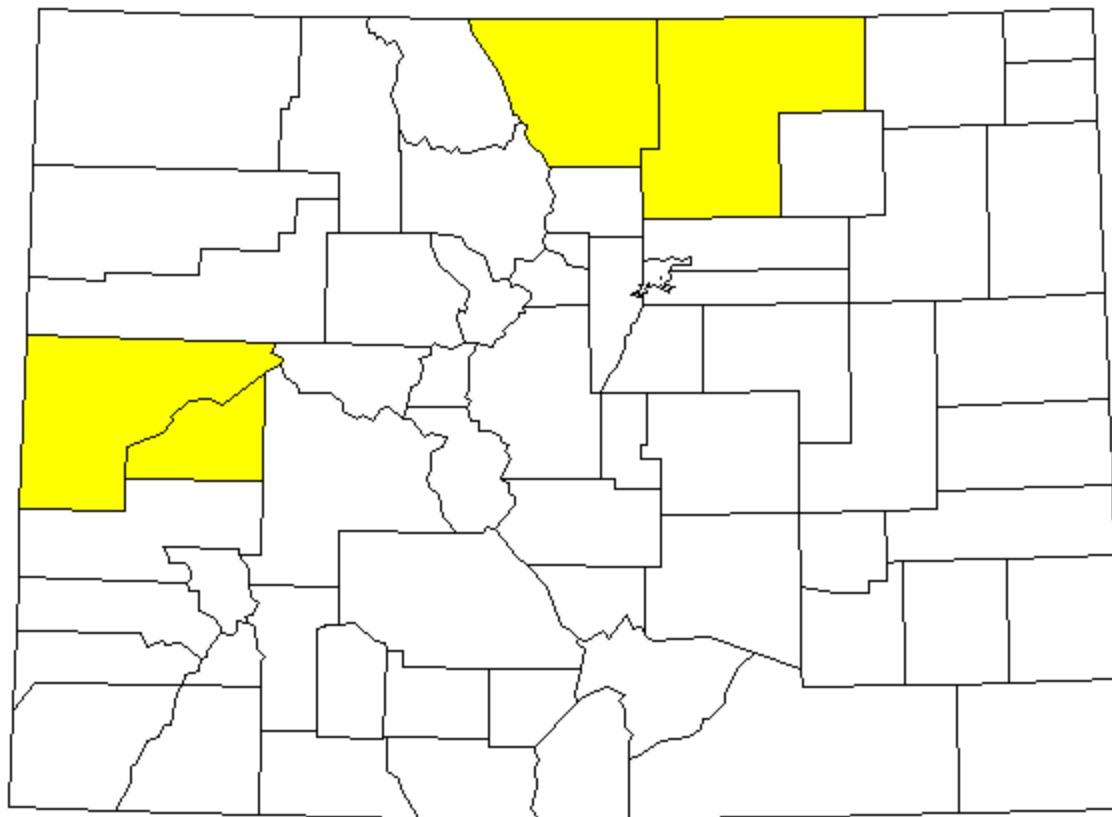
- Dave Leatherman
- Jason Bishop
- Lou Bjostad

The Cent  
Negative



*Reported Status of*  
**PINE SHOOT BEETLE (PSB) , TOMICUS PINIPERDA**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out



The Center for Environmental and Regulatory Information Systems does not  
Negative data spans over last 3 years only.

**Jason Bishop**

**Lou Bjostad**

– **Colorado State University**

# ***Emerald Ash Borer***

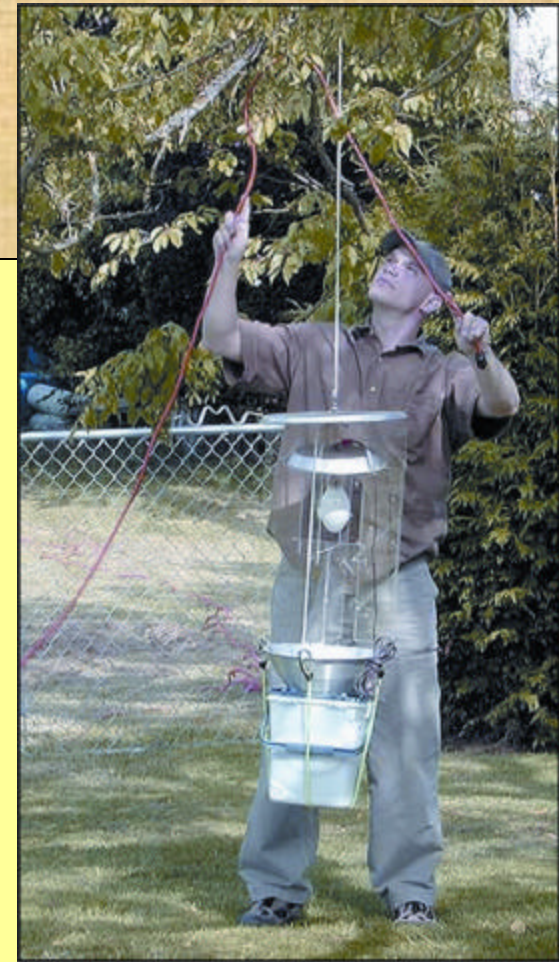


- **our top priority as a possible new pest**
- **destruction of many trees in Detroit area**
- **not easy to survey**
  - visual inspection
  - lure for detection trapping would be preferable



# *European Chafer*

- *new concern as a Western Region pest*
- widespread in northeast U.S.
- slowly spreading into other areas
  - British Columbia
  - Michigan
- *Colorado imports much ball & burlap stock from Michigan and nearby states*
- light trap survey is effective



<http://www.agf.gov.bc.ca/cropprot/chafer.htm>





March 12, 2003

---

**2002 Light-trap Detection Survey for European Chafer, *Rhizotrogus majalis* (Raz.) (Coleoptera: Scarabeidae), a Turf and Grain Pest Recently Found in B.C., Canada**

**Eric H. LaGasa<sup>1</sup>, Patrik Hertzog<sup>2</sup>, and Denise Bowden<sup>2</sup>**

---

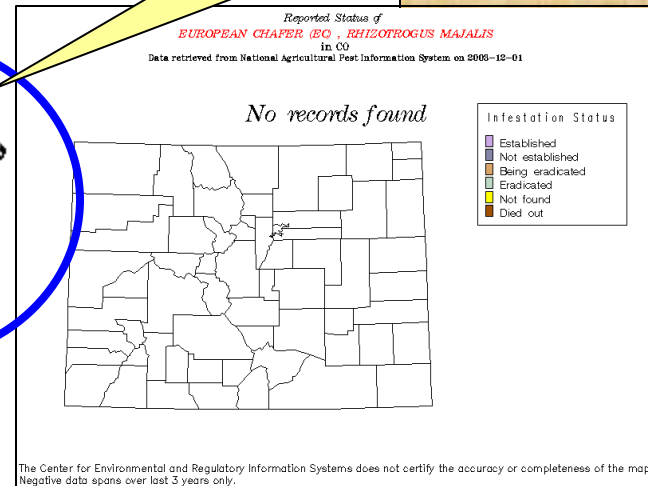
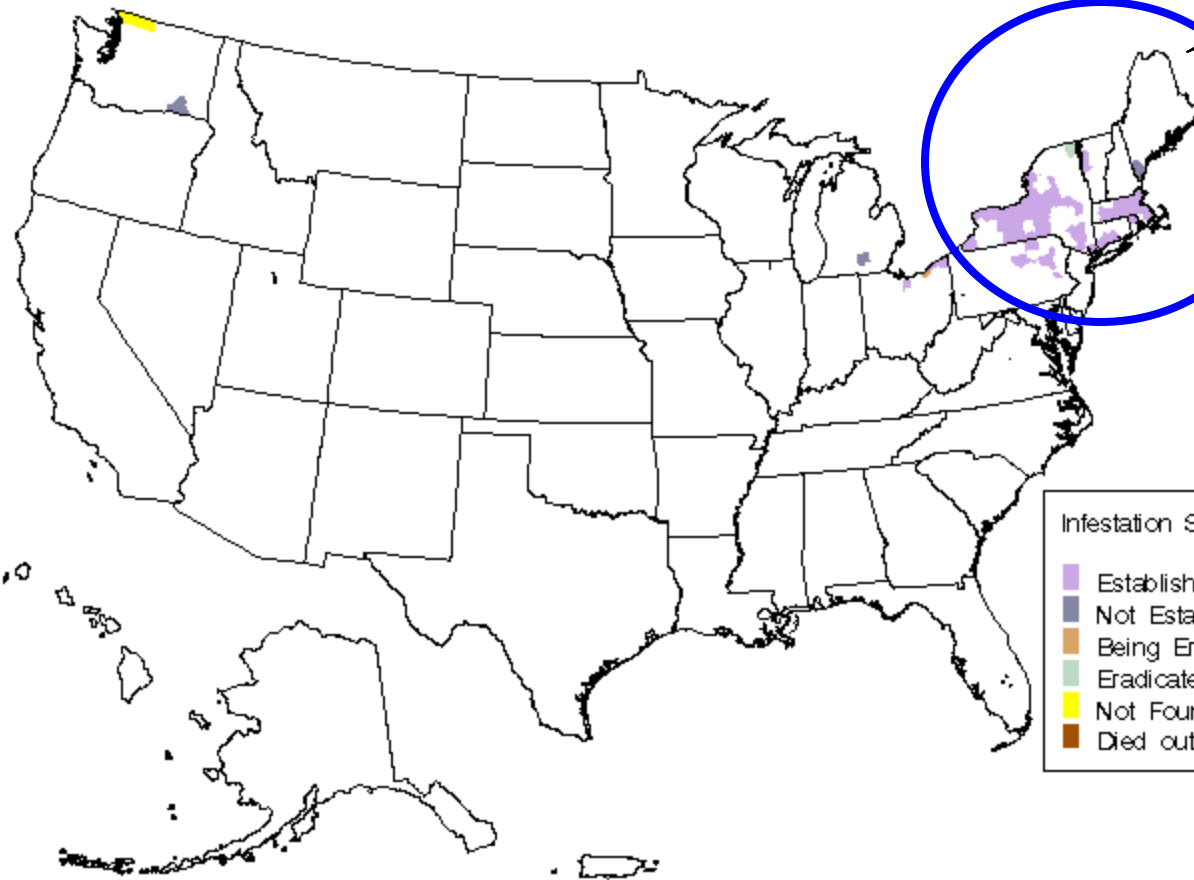
Native to Europe, the European chafer (EC) was first found in the U.S. in 1940 in Newark, New York. Extensive infestations found in western New York, Pennsylvania, and West Virginia prompted a federal quarantine (77) in 1955 (which was revoked in 1972), but the pest remains important to export certification interests (USDA APHIS CAPS 1993).

The pest subsequently spread throughout the Northeastern U.S. and adjacent Canada, and recently into Michigan, where it rapidly became “probably the most serious grub pest of home lawns” (Michigan State CES 2003). In 2001, EC was found to be established in the New Westminster area of British Columbia, Canada, where it is causing prominent damage of home lawns (Costello 2002). The known infested area in B.C., Canada, is less than 15 miles from Blaine, Washington.

*Reported Status of*  
**EUROPEAN CHAFER (EC) , RHIZOTROGUS MAJALIS**  
in US and Puerto Rico

Data retrieved from National Agricultural Pest Information System on 2003-12-01

**common in  
northeast US**



Infestation Status

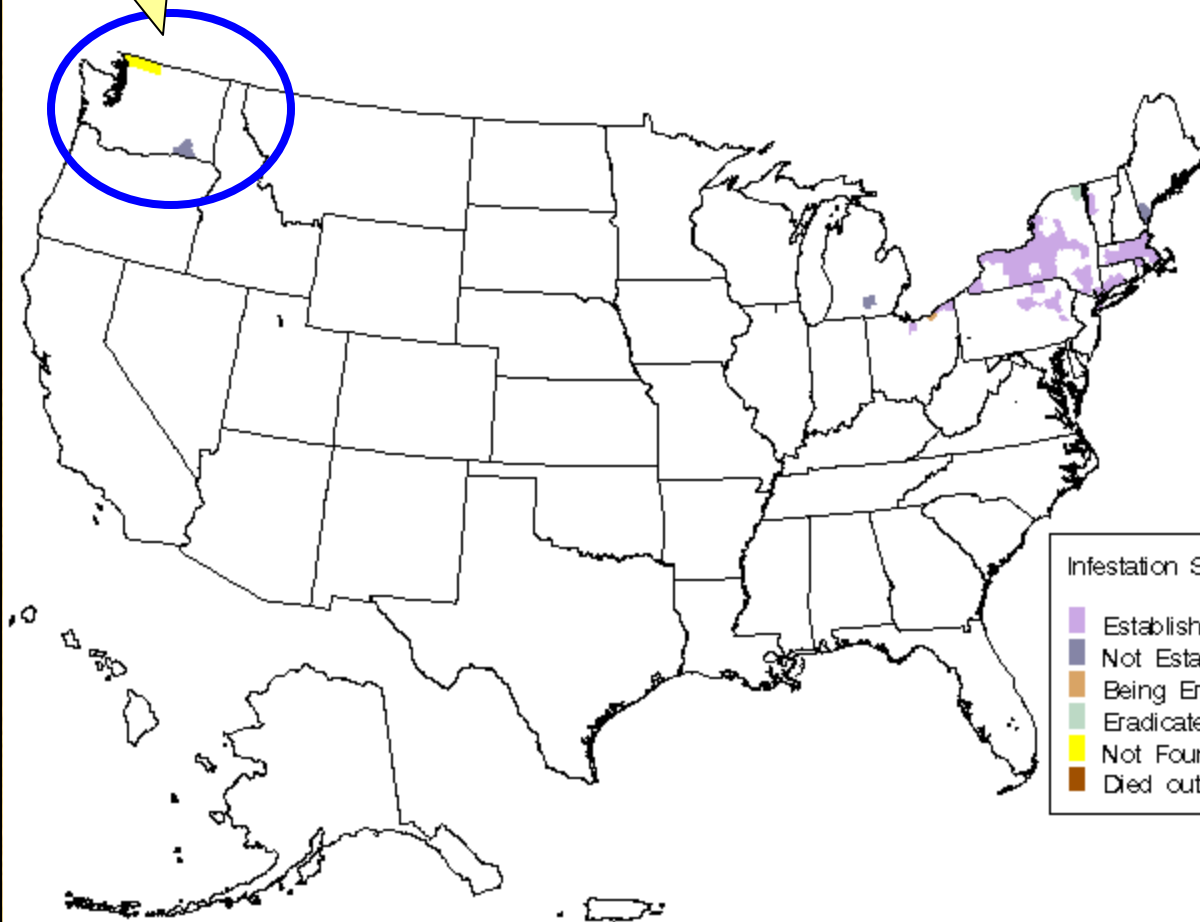
- Established
- Not Established
- Being Eradicated
- Eradicated
- Not Found
- Died out

The Center for Environmental and Regulatory Information Systems does not certify the accuracy or completeness of the map.  
Negative data spans over last 3 years only.

concern in  
northwest US

*Reported Status of*  
**EUROPEAN CHAFER (EC) , RHIZOTROGUS MAJALIS**  
in US and Puerto Rico

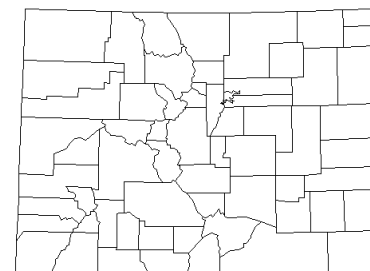
Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not certify the accuracy or completeness of the map.  
Negative data spans over last 3 years only.

*Reported Status of*  
**EUROPEAN CHAFER (EC) , RHIZOTROGUS MAJALIS**  
in CO  
Data retrieved from National Agricultural Pest Information System on 2003-12-01

*No records found*



Infestation Status

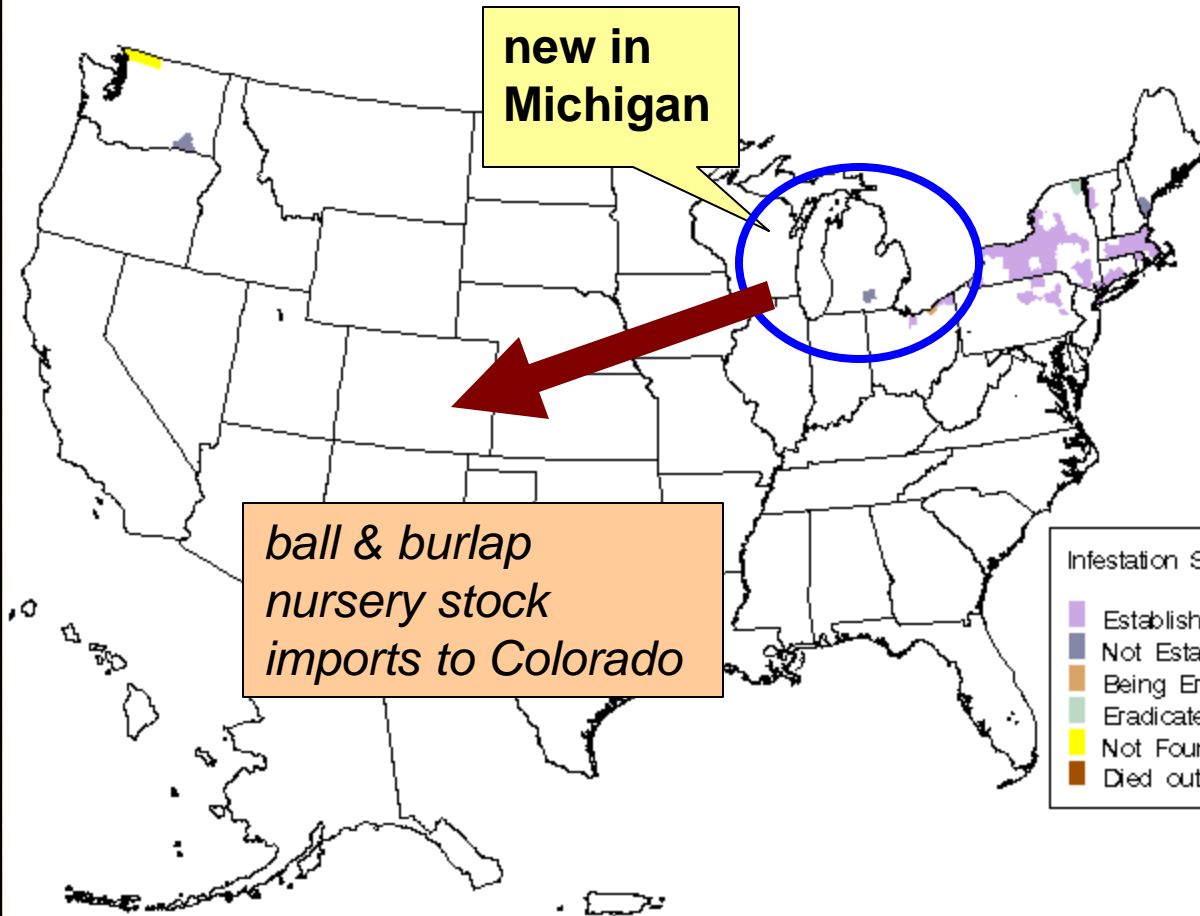
- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out

The Center for Environmental and Regulatory Information Systems does not certify the accuracy or completeness of the map.  
Negative data spans over last 3 years only.

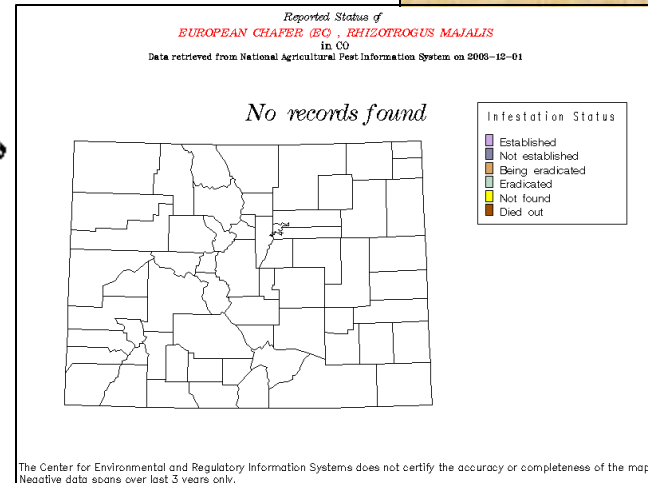


*Reported Status of*  
**EUROPEAN CHAFER (EC) , RHIZOTROGUS MAJALIS**  
 in US and Puerto Rico

Data retrieved from National Agricultural Pest Information System on 2003-12-01

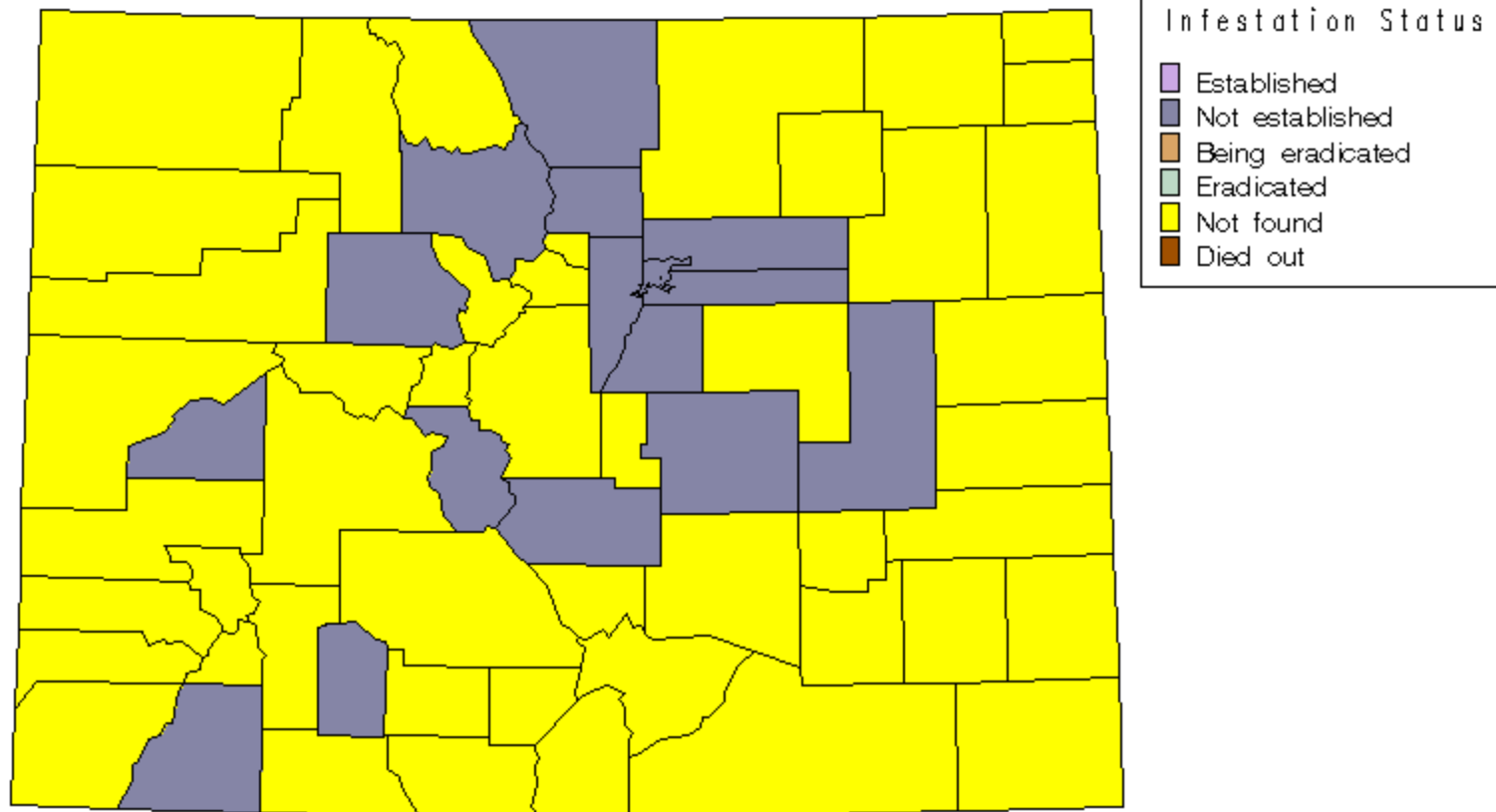


The Center for Environmental and Regulatory Information Systems does not certify the accuracy or completeness of the map.  
 Negative data spans over last 3 years only.



*Reported Status of*  
***GYPSY MOTH (EUROPEAN) (GM) , LYMANTRIA DISPAR***  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does  
Negative data spans over last 3 years only.

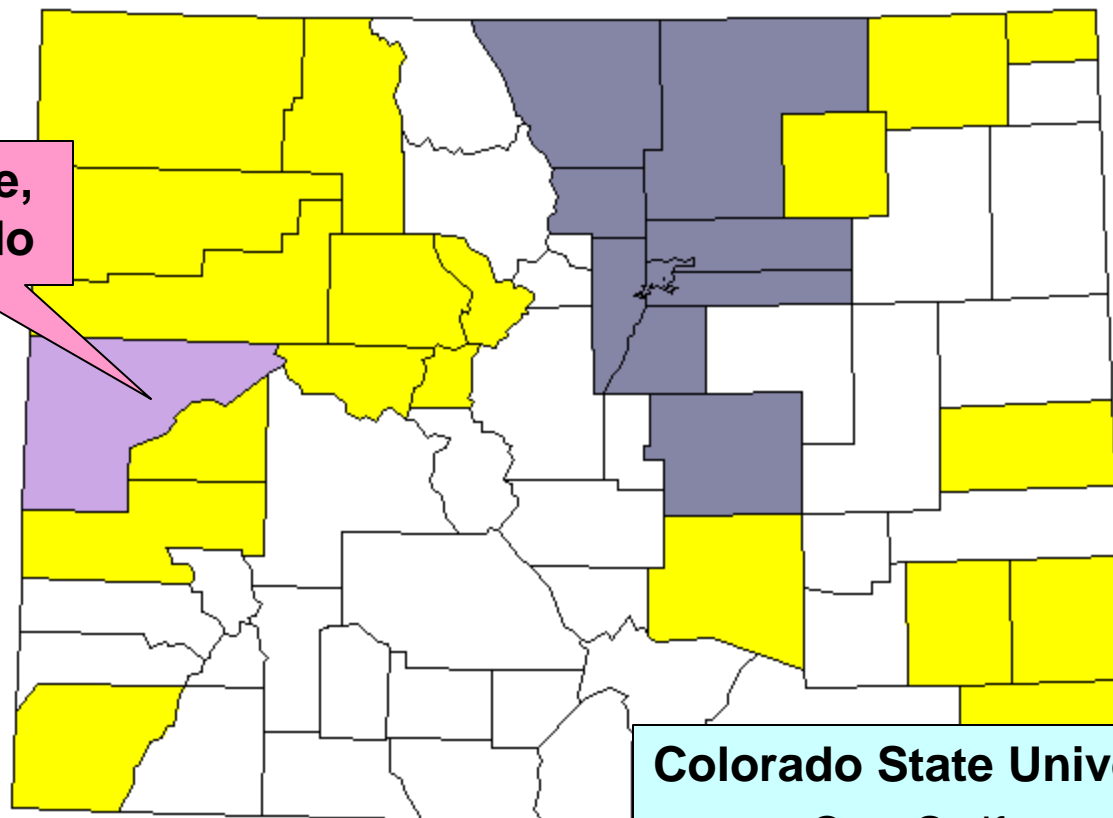
## Dave Leatherman

- Colorado State Forest Service
- eradication effort 1984

# Japanese Beetle Outbreak & Eradication Effort in Palisade, CO

## Reported Status of JAPANESE BEETLE (JB) , *POPILLIA JAPONICA* in CO

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Palisade,  
Colorado

### Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out

The Center for Environmental and Regulatory Information  
Negative data spans over last 3 years only.

### Colorado State University

- Curt Swift
- Whitney Cranshaw

### Colorado Department of Agriculture

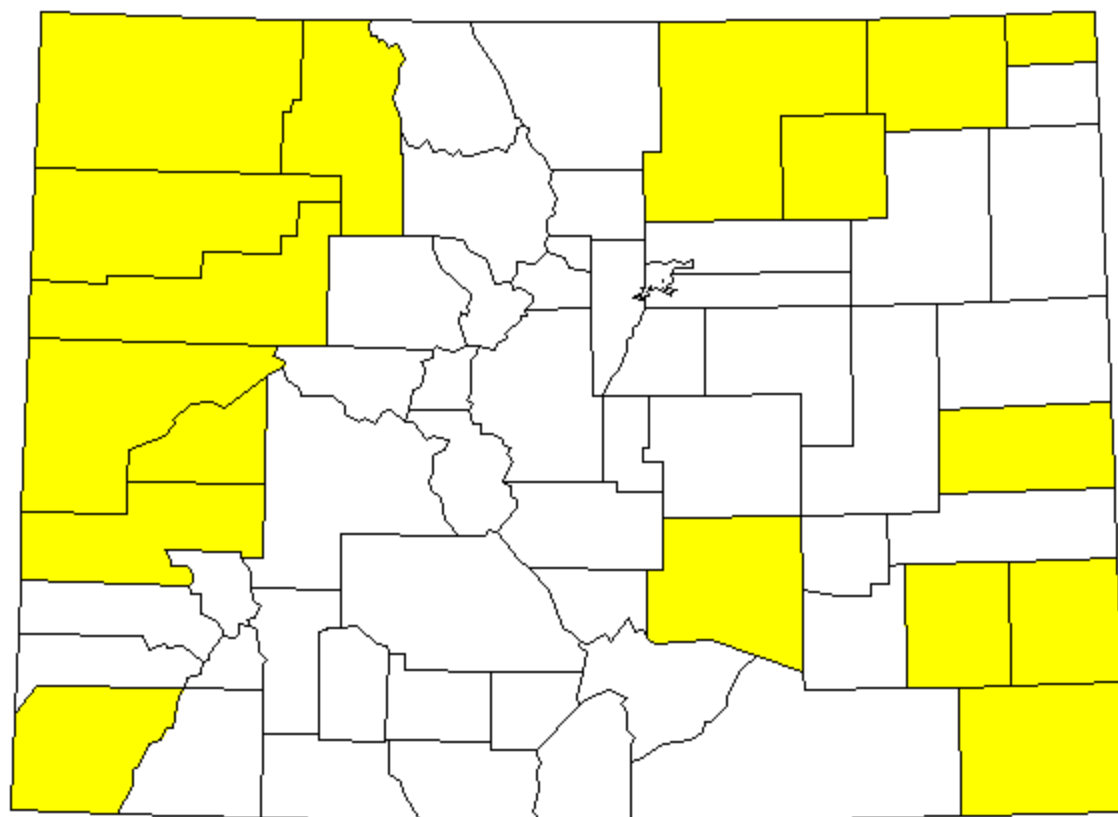
- Jerry Cochran
- Mitch Yergert



# ***Program Pests***

*Reported Status of*  
***KHAPRA BEETLE , TROGODERMA GRANARIUM***  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out

The Center for Environmental and Regulatory Information Systems does not  
Negative data spans over last 3 years only.

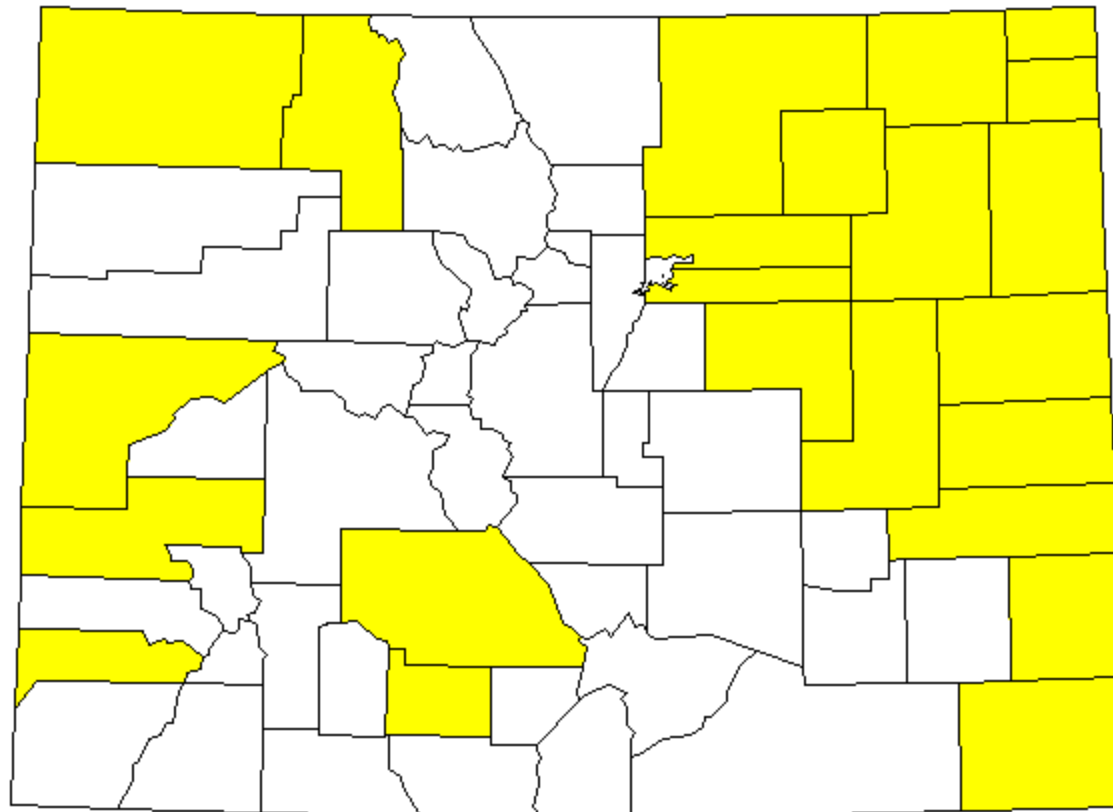
**Jason Bishop**

**Lou Bjostad**

– Colorado State University

*Reported Status of*  
**KARNAL BUNT , *TILLETIA (NEOVOSIA) INDICA***  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out

The Center for Environmental and Regulatory Information Systems does not collect  
Negative data spans over last 3 years only.

**Bill Brown**

**Lou Bjostad**

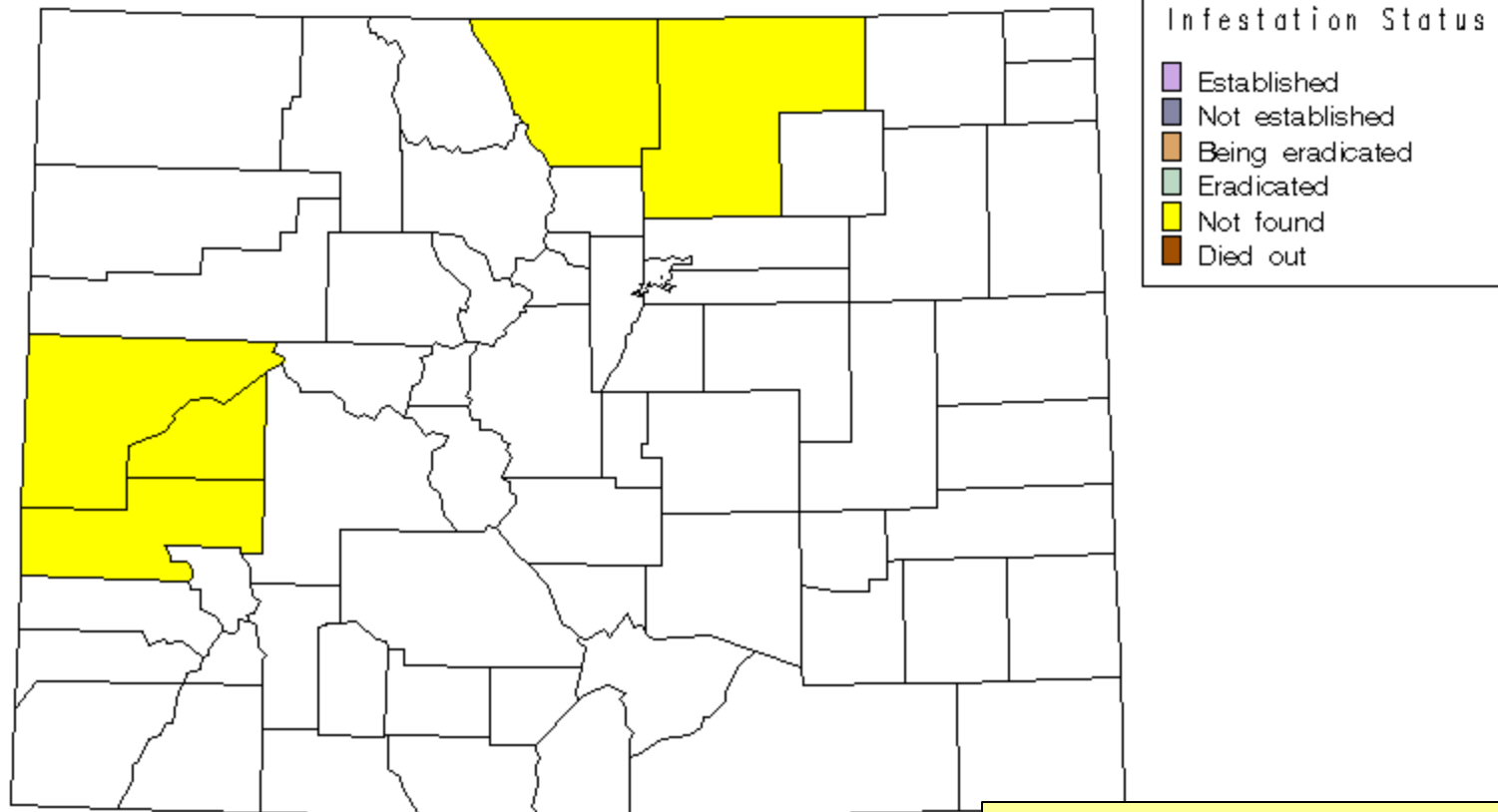
– Colorado State University

# ***Fruit Pests***



*Reported Status of*  
***CHERRY BARK TORTRIX (CBT) , ENARMONIA FORMOSANA***  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not collect  
Negative data spans over last 3 years only.

**Bob Hammon**

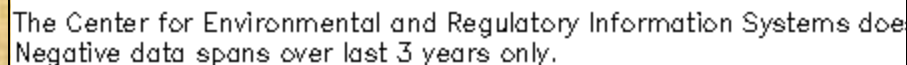
**Rick Zimmerman**

**Jason Bishop**

**Lou Bjostad**

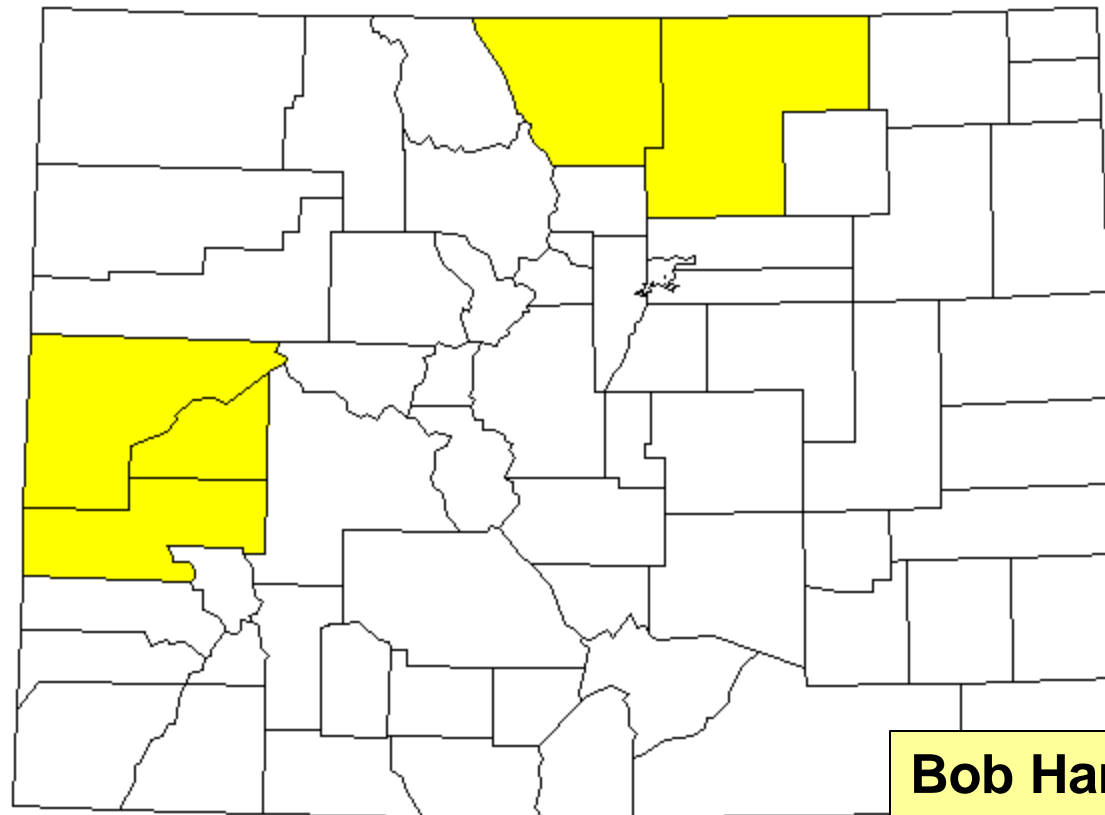
– Colorado State University

Data retrieved from National Agricultural Pest Information System on 2003-12-01



– Colorado State University

*Reported Status of*  
**APPLE ERMINE MOTH (AEM) , YPONOMEUTA MALINELLUS**  
**in CO**  
Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not have data for the following counties: Adams, Arapahoe, Aurora, Broomfield, Boulder, Clark, Clear Creek, Colorado Springs, El Paso, Fremont, Grand, Grand Junction, Hinsdale, Imperial, Jefferson, Kit Carson, Lake, Larimer, Lincoln, Logan, Montezuma, Morgan, Otero, Park, Pueblo, San Juan, Sedona, Teller, and Weld. Negative data spans over last 3 years only.

**Bob Hammon**

**Rick Zimmerman**

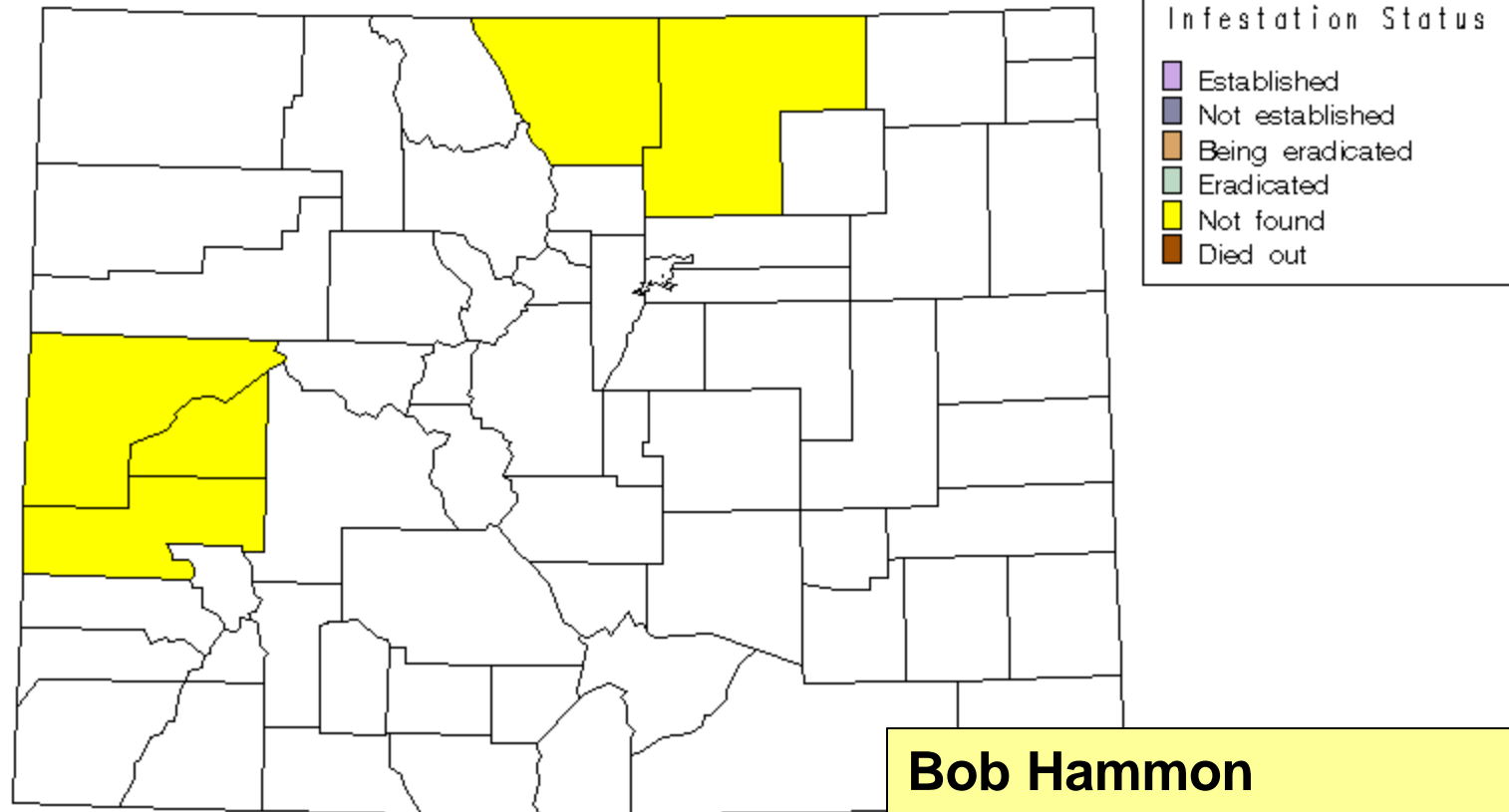
**Jason Bishop**

**Lou Bjostad**

– Colorado State University

*Reported Status of*  
***SUMMER FRUIT TORTRIX , ADOXOPHYES ORANA***  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not report negative data spans over last 3 years only.

**Bob Hammon**

**Rick Zimmerman**

**Jason Bishop**

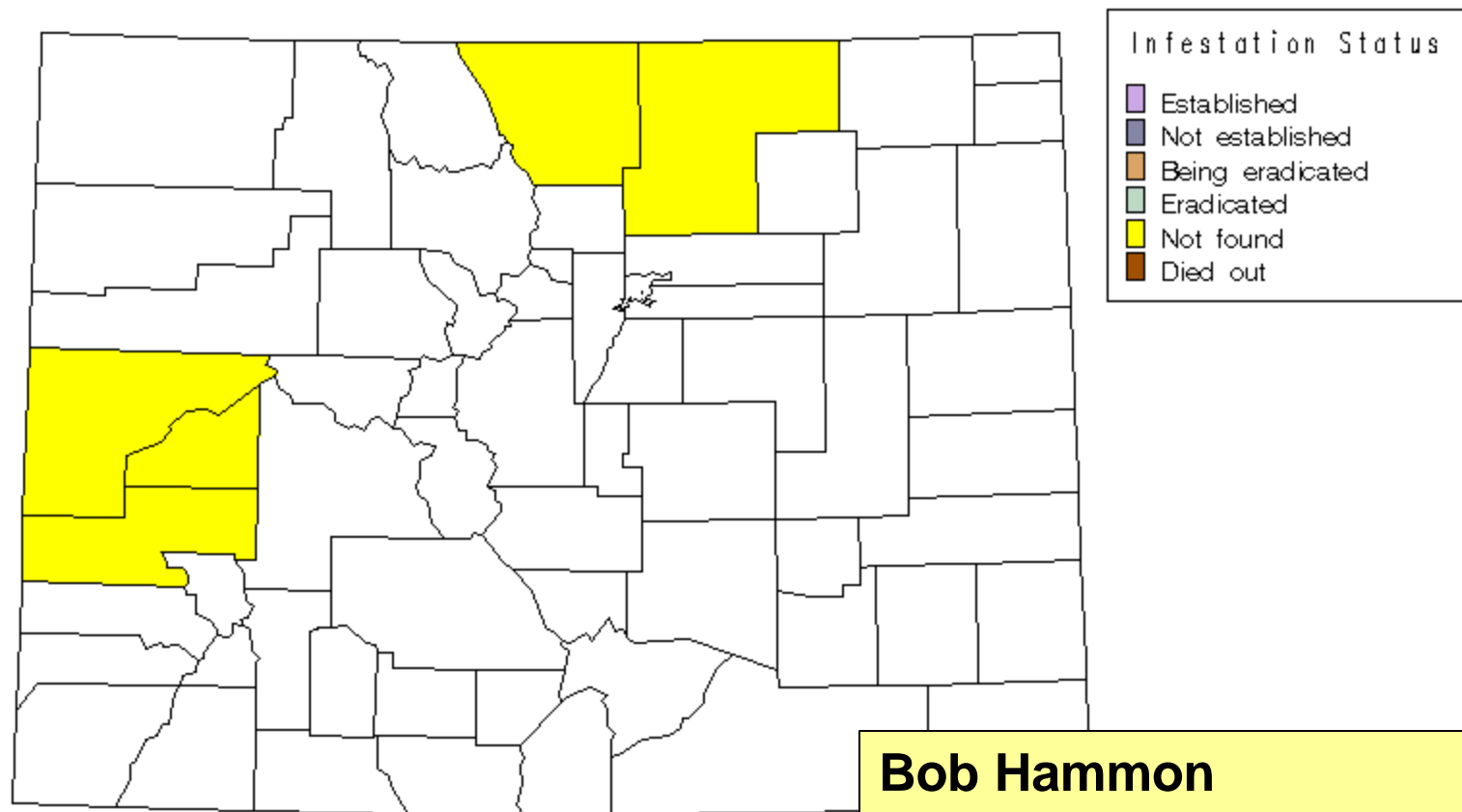
**Lou Bjostad**

– Colorado State University



*Reported Status of*  
**PEAR LEAF BLISTER MOTH , LEUCOPTERA MALIFOLIELLA**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not report negative data spans over last 3 years only.

**Bob Hammon**

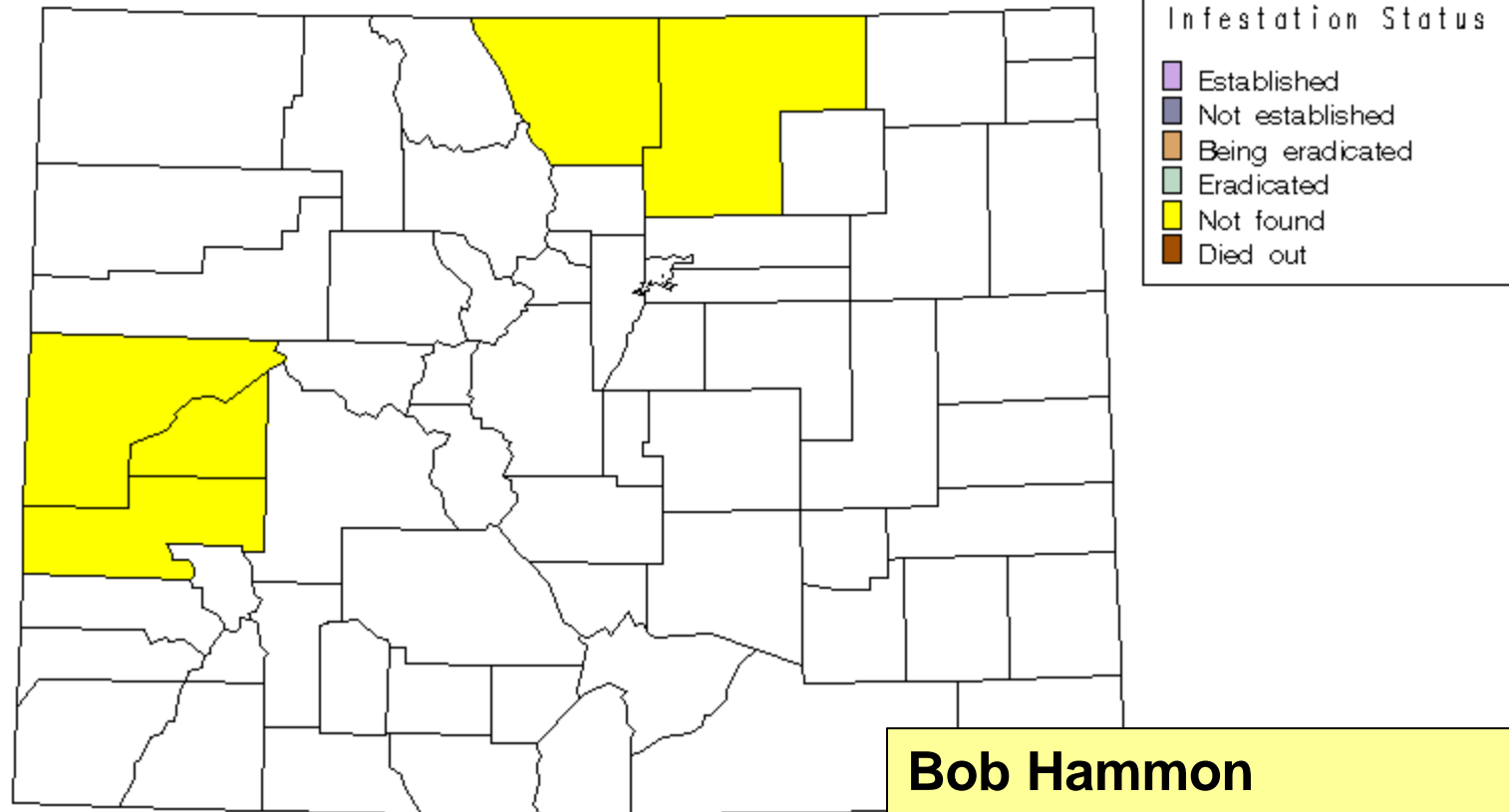
**Rick Zimmerman**

**Jason Bishop**

**Lou Bjostad**

– Colorado State University

*Reported Status of*  
**GLASSYWINGED SHARPSHOOTER , HOMALODISCA COAGULATA**  
**in CO**  
Data retrieved from National Agricultural Pest Information System on 2003-12-01



The Center for Environmental and Regulatory Information Systems does not have data for the following counties:  
Negative data spans over last 3 years only.

**Bob Hammon**

**Rick Zimmerman**

**Jason Bishop**

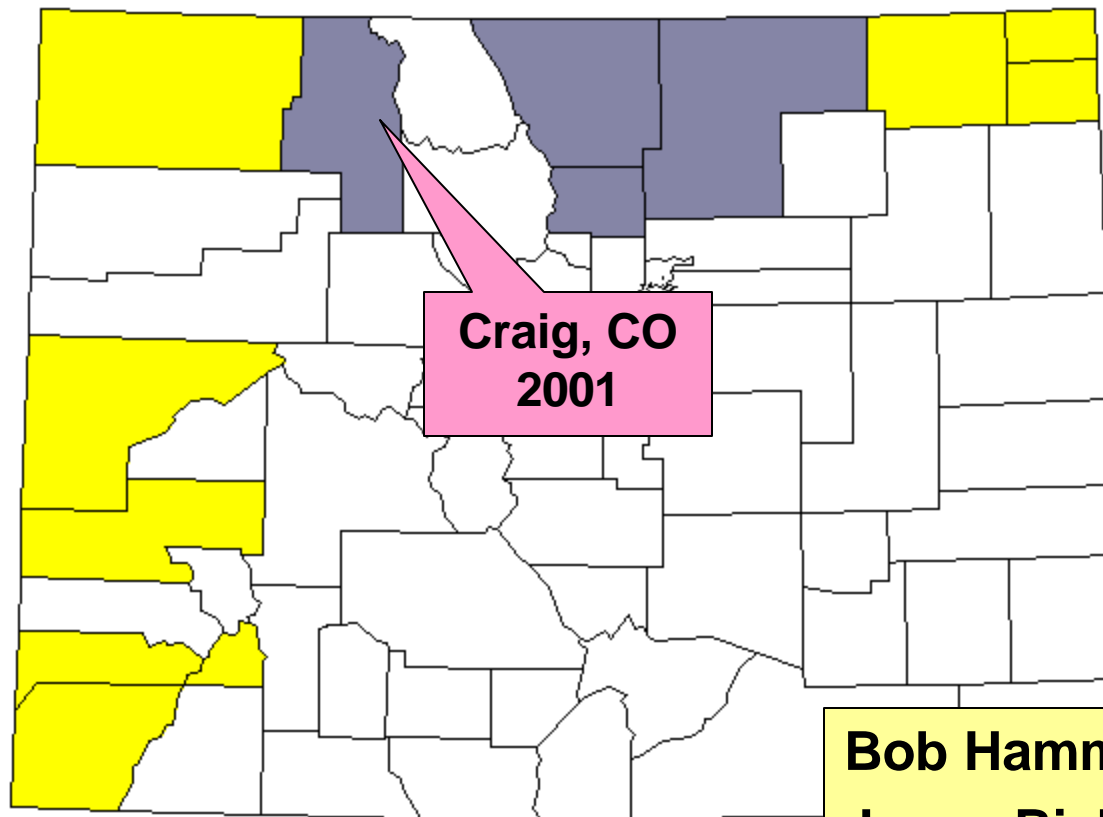
**Lou Bjostad**

– Colorado State University

# ***Cereal Leaf Beetle***

*Reported Status of*  
**CEREAL LEAF BEETLE (CLB) , OULEMA MELANOPUS**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

-  Established
-  Not established
-  Being eradicated
-  Eradicated
-  Not found
-  Died out



**Bob Hammon**  
**Jason Bishop**  
**Frank Peairs**  
**Lou Bjostad**

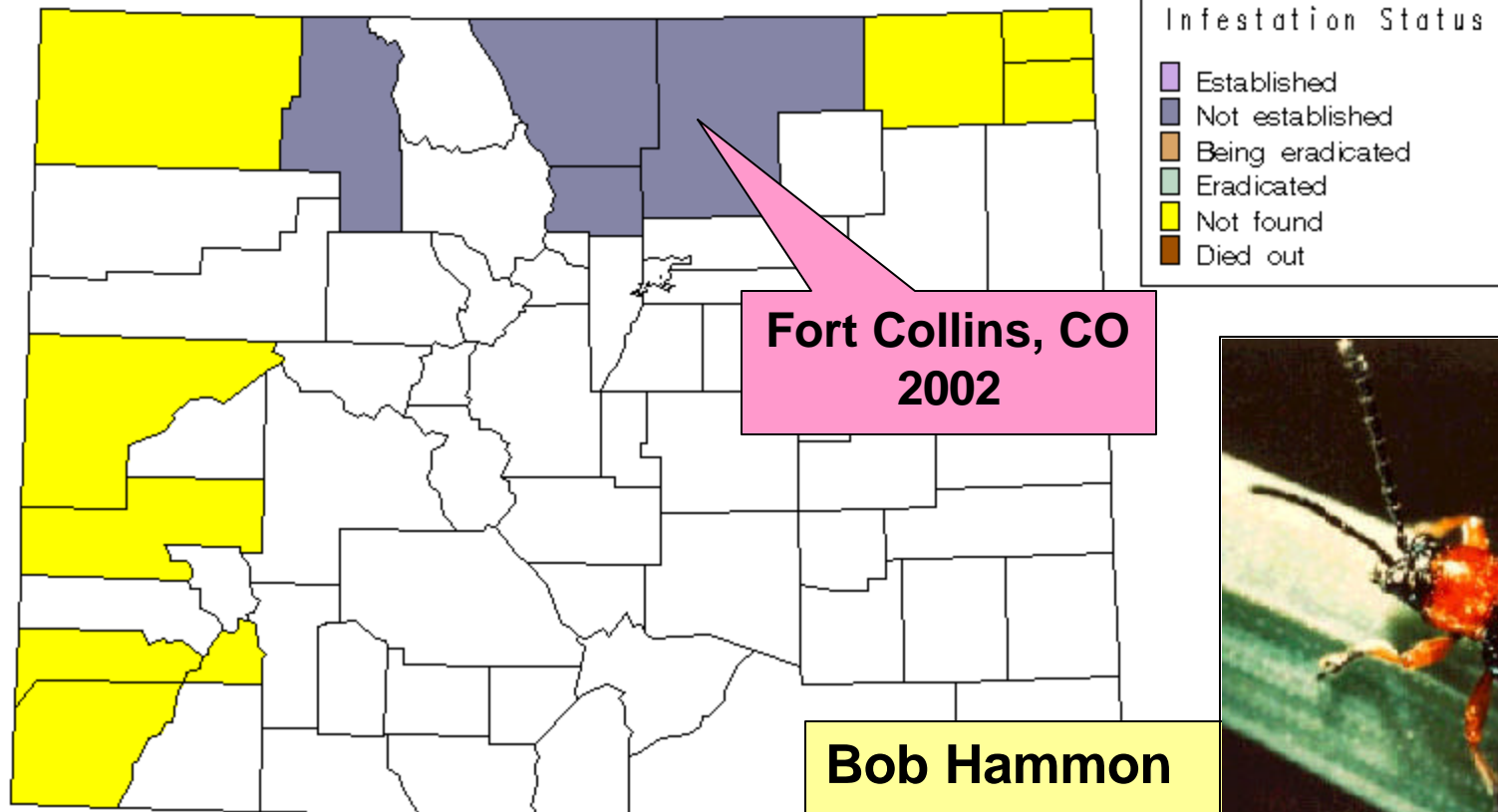
– Colorado State University

The Center for Environmental and Regulatory Information Systems  
Negative data spans over last 3 years only.



*Reported Status of*  
**CEREAL LEAF BEETLE (CLB) , OULEMA MELANOPUS**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



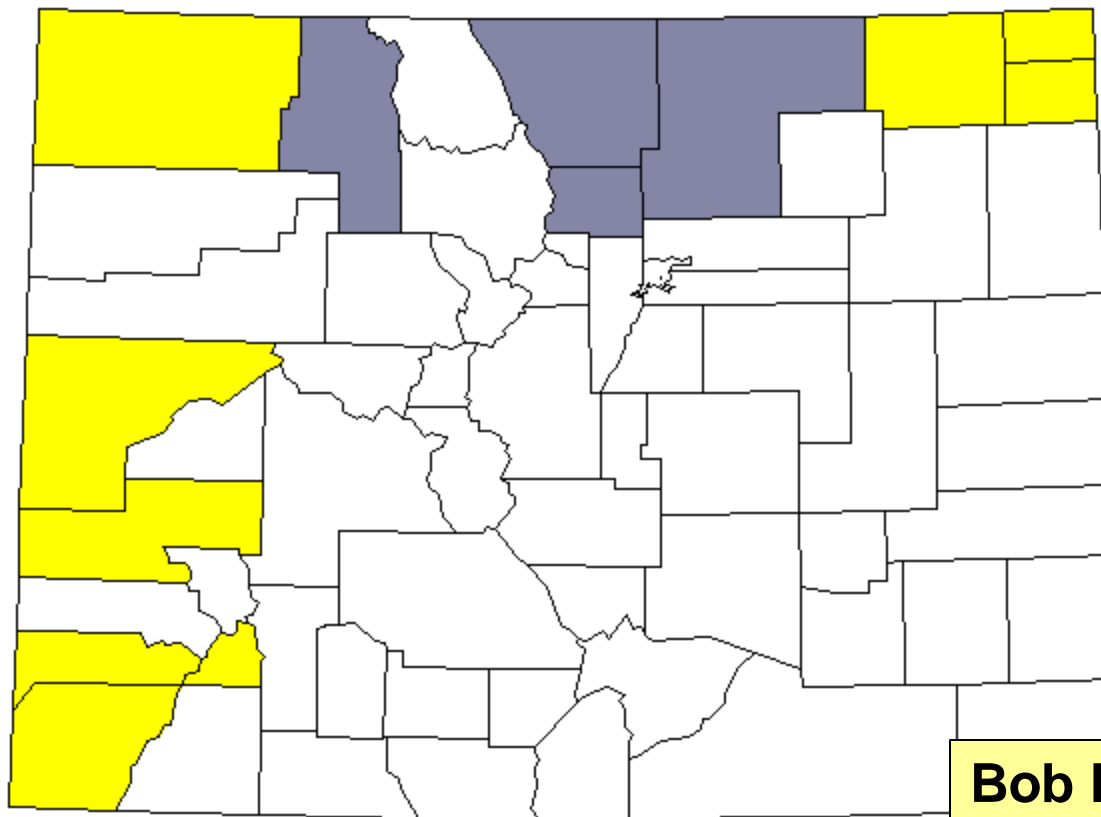
**Bob Hammon**  
**Jason Bishop**  
**Frank Peairs**  
**Lou Bjostad**

– Colorado State University

The Center for Environmental and Regulatory Information System  
Negative data spans over last 3 years only.

*Reported Status of*  
**CEREAL LEAF BEETLE (CLB) , OULEMA MELANOPUS**  
**in CO**

Data retrieved from National Agricultural Pest Information System on 2003-12-01



Infestation Status

- Established
- Not established
- Being eradicated
- Eradicated
- Not found
- Died out

**Almost no beetles  
or larvae in 2003.**

The Center for Environmental and Regulatory Information Systems does not  
Negative data spans over last 3 years only.

**Bob Hammon  
Jason Bishop  
Frank Peairs  
Lou Bjostad**

– Colorado State University



# ***Plant Pathogens***



CROP	CAUSAL AGENT	DISEASE	SURVEY AREA	EXTENSION COOPERATORS
WHEAT	<i>Urocystis agopyri</i> <i>(tritici)</i> <i>Tilletia controversa</i> <i>Kuhn</i> <i>Anguina tritici</i> High Plains Disease <i>Xanthomonas campestris</i> <i>pv translucens</i> <i>Claviceps purpurea</i> <i>Puccinia graminis f.sp.</i> <i>tritici</i> <i>*Xanthomonas oryzae</i> <i>pv. oryzaicola</i>	Flag smut Dwarf bunt Seed Gall nematode Virus Black Chaff  Ergot Black Stem Rust Bacterial leaf streak	San Luis Valley Western Slope/ Grand Junction area Front Range (Larimer, Weld, Adams, Douglas, El Paso, Jefferson) Eastern Colorado (Yuma, Kit Carson, Phillips, Sedgwick, Logan, Morgan, Washington, Prowers, Cheyenne, Kiowa, Elbert, Lincoln, Bent	WITH: Ron Meyer Bruce Bosley Thaddeus Gourd Roberta Tolan Jerry Alldredge Merlin Dillon Curt Swift Assefa Gebre- Amlak Tim Macklin Leonard Pruitt
BARLEY	<i>Xanthomonas campestris</i> <i>pv translucens</i> <i>Claviceps purpurea</i>	Virus Bacterial Blight of Barley Ergot	Survey area same as Wheat	See Wheat
CORN	<i>Sporisorium holeisorghi</i> <i>(Sphacelotheca reiliana)</i> <i>Erwinia stewartii</i> <i>Clavibacter</i> <i>michiganensis pv.</i> <i>nebraskensis</i> <i>(Corynebacterium</i> <i>nebraskense)</i> <i>*Peronosclerospora</i> <i>phillippinesis</i> <i>*Sclerophthora rayssiae</i> var. <i>zeae</i>	Head smut  Stewart's wilt Goss's wilt Phillipine Downy Mildew Brown Stripe Downy Mildew	Survey area same as Wheat	See Wheat
ALFALFA/ONION	<i>Ditylenchus dipsaci</i>	Stem Bulb Nematode	SLV/Front Range	RMPDDL
DAYLILY	<i>Puccinia hemerocallidis</i>	Daylily Rust	Greenhouse/Nurseries	Laura Pottorf



CHRYSANTHEMUM	<i>Puccinia horiana</i>	Chrysanthemum White Rust	Greenhouse/Nurseries	Laura Pottorf
POTATO	<i>*Synchytrium endobioticum Phytophthora infestans *Ralstonia solanacearum, R3, bv2</i>	Potato Wart Late Blight Brown Rot of Potato	San Luis Valley	Merlin Dillon
SOYBEAN	<i>*Phakopsora pachyrhizi</i>	Soybean Rust	Survey area same as Wheat	See Wheat
PLUM CHERRY PEACH ALMOND APPLE APRICOT	<i>*Potyvirus : Potyviridae Nepovirus : Comoviridae</i>	Plum Pox Virus (PPV) Cherry Leaf Roll Virus (CLRV)	Western Slope fruit growing region	Rogers Mesa Research Center & Orchard Mesa Research Center Harold Larson
GRAPES	<i>*Xylella fastidiosa</i>	Pierce's Disease	Western Slope fruit growing region	Rogers Mesa Research Center & Orchard Mesa Research Center Harold Larson
OAK	<i>Phytophthora ramorum</i>	Sudden Oak Death	Nursery/Forested areas	Bill Jacobi
NEMATODE SURVEY	<i>Heterodera rostochiensis Meloidogyne chitwoodi Heterodera glycines/chindre Ditylenchus destructor Meloidogyne hapla Meloidogyne javanica</i>	Golden Columbia Root Knot Soybean Cyst Potato Rot Northern Root Knot Root Knot	SLV/Front Range and other production areas	RMPDDL

# ***Partnerships for Safeguarding***

- Federal            USDA-APHIS-PPQ
- State Agricultural System (Rick Dunkle)
  - State Departments of Agriculture
    - regulatory role is primary function
  - Land Grant Universities
    - ***confirmatory role*** is actually only a secondary role
      - MI, NY, FL, CA, KS land grant universities as identifiers
    - ***"new knowledge"*** is primary function of universities
      - land grant universities in all 50 states

"Pest detection is now a frail, weak, and undeveloped area. We have to get this pest detection thing figured out. Agroterrorism is a very real threat."

- Chuck Schwalbe

# ***Universities now have a minimal role in the CAPS program.***

"Got money?"

- Jim Reynolds

2002	\$6.7 million
------	---------------

2003	\$22.3 million
------	----------------

2004	\$26.2 million
------	----------------



# ***Manhattan Project***



## **history similar to CAPS program**

- homeland security was the main concern
- major administrative changes were made in response

## **General Leslie Groves**

- recruited university researchers as key strategic partners
- organizing university researchers was like herding cats
- despite this, his recruitment of university researchers created a major success that helped to end World War II

# ***Land Grant Universities***

## **Opportunities to CAPS program**

- universities are a good source of cost-effective solutions
  - large pool of creative talent
  - flexible funding through Cooperative Agreements
- land grant universities distributed through all 50 states
- "I'm from the government, I'm here to help you"
  - landowners are often more willing to give permission for surveys to university personnel than to federal or state regulatory officials

## **Motivation**

- state funding to universities is in crisis
- federal \$ to universities through NRI is low
- university researchers are hungry

# ***CAPS*** ***in*** ***Colorado***

## **Colorado Department of Agriculture**

- Jerry Cochran
- Mitch Yergert

## **USDA-APHIS-PPQ**

- Pat McPherren, SPHD
- Tim Miller

## **Colorado State University**

- ***Entomology***

- Jason Bishop
- David James
- Matt Siderhurst
- Bob Hammon
- Rick Zimmerman
- Dave Leatherman
- Lou Bjostad

- ***Plant Pathology & Weeds***

- Howard Schwarz
- Tamla Blunt